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ABSTRACT

This study examined the effect of family composition on high school graduation and level of completed education. It tests the hypotheses that children in single-mother households may be adversely affected in their educational attainment because of the economic deprivation common to such households, the stress caused by family separation, and socialization problems attributable to a lack of male role models. The study used data from the National Survey of Families and Households, which contains information on respondents' household composition while they were growing up and details disruptions in those households where disruptions existed. The effects of family composition on high school graduation, college attendance, and college graduation are examined. Study findings show that divorce and child bearing out of wedlock do contribute negatively to the lives of children, more for Whites than Blacks, with regard to educational attainment. Furthermore, it is not single motherhood per se that is detrimental, but the stress and lower income associated with marital break-up that accounts for most of the differences in graduation rates by family composition. Ten tables and seven figures show report data. (Contains 55 references.) (GLR)

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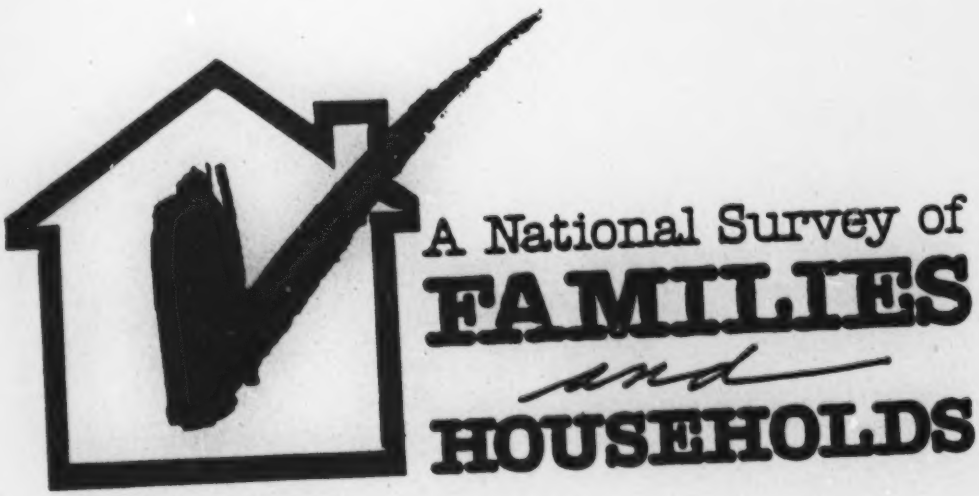

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The Effects of Family Composition on Educational Attainment

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The Effects of Family Composition on Educational Attainment

The proportion of children who spend some time in a single parent household has increased markedly since the 1960s. Twenty-two percent of those born between 1940 and 1949 had lived in some family arrangement other than two-parent by age 16, and this figure is up to 36 percent for the 1960-69 cohort (Bumpass and Sweet, 1988). Half of the children born between 1977 and 1979 are projected to spend some time in a single parent family (Bumpass 1984).

Growing up in a single parent family has been shown to have effects on determinants of adult wellbeing, such as educational attainment (McLanahan 1985; Krein and Beller, 1988) and chances of becoming a single parent (McLanahan and Bumpass 1988; McLanahan 1985; Bane and Ellwood 1983; Martinson and Bumpass 1990). This analysis looks specifically at the effect of family composition on high school graduation and level of completed education.

Influence of Family Composition on Adult Outcomes

Most studies refer to three avenues through which spending some time in a single parent household as a child may affect educational attainment: economic deprivation, stress, and socialization.

Economic Deprivation. The fact that female-headed families are economically disadvantaged is well documented (Bane and Ellwood, 1986; Garfinkel and McLanahan, 1986; Duncan and Hoffman, 1985). Having a lower income can affect educational attainment in various ways. For instance, if the family is having financial difficulties, children may quit school to help support themselves and their families (Weiss, 1979). This is especially true of older children with younger brothers and/or sisters (Wallerstein

and Kelly, 1980). While results from previous studies show that the economic deprivation hypothesis explains some of the effect of family composition on educational attainment (Hetherington et al., 1983; Bianchi, 1984; McLanahan, 1985; Sandefur et al., 1989; Krein and Beller, 1988), these studies demonstrate that social psychological factors also have an impact.

Stress. It is likely that the discord surrounding the divorce is stressful for children, who are faced with conflicted loyalties. Even when the fight for loyalty is not overt, young children may believe that the separation is somehow caused by them (Wallerstein and Kelly, 1980; Hetherington et al., 1983). In addition, children experience the loss of regular contact with their fathers.

Socialization. Some hypothesize that the lack of a male role model upsets children's, especially boys', personality development. This hypothesis is often used to explain the stronger effects of marital break-up on boys than girls Guidubaldi et al., 1986; Hetherington et al., 1979). The lack of a father can also have an indirect impact on the child's (or adolescent's) socialization, however.

One variation of the socialization hypothesis concerns the amount of supervision children in these families receive. The supervision hypothesis states that because the mother now supports the family alone, she has less time to attend to the children's problems. If there are troubles with school grades, behavior, or attendance, the mother is less able to schedule a conference or to ensure that the child goes to school.

Some research suggests that the hierarchy of the family is weakened when the mother becomes a single parent (Weiss, 1979; Wallerstein and Kelly, 1980). Mothers look

to their children for emotional support, making the parent-child relationship more like that of friends. While this may make communication easier and enable a better understanding between the mother and her children, it also makes it more difficult for her to effectively discipline them (Wallerstein and Kelly 1980). In addition, there is evidence from research on intact families that children are more likely to obey their fathers than their mothers (Hetherington, Cox and Cox, 1978).

Data

To test these hypotheses, data from the National Survey of Families and Households (NSFH) are used (Sweet, Bumpass and Call, 1988). These data contain information on the respondents' household composition while they were growing up, as well as details on the reasons for disruptions in these households if a disruption occurred. This gives us an opportunity to test the effects of ever having been in a single (or step) parent family and how these effects vary by the respondent's age at and reason for the disruption.

Those respondents born in the United States between 1943 and 1962 (age 25-44) are selected for the section concerning high school graduation. When higher levels of education are considered only those aged 30 to 44 are included in the sample. Those born outside the United States are not included because of the differences between the educational system of the United States and other countries.

Dependent Variables

There are two variables used to measure high school graduation. The first

variable does not include GEDs[1] as high school diplomas, while the second does. Most people (70%) who get GEDs report that they have high school diplomas. Because of data limitations many studies do not differentiate between diplomas and GEDs. Since GEDs are received in higher proportions by those from non-intact families, the effects of family disruption on high school graduation are underestimated if GEDs are not separated from high school diplomas.

After looking at family composition effects on high school graduation, the effects on college attendance and graduation are examined. The measures of higher educational attainment are primarily to test family background effects but are also to examine whether GEDs are similar to high school diplomas.

Expectations of the Three Theories

The expectations of the effects of family composition and age at disruption differ by these three theories. Figure 1 shows the expected direction of the effects of step-parent families and age at disruption on educational attainment. Including having ever received welfare benefits in the models is the most direct way the economic deprivation hypothesis is tested. Income histories were not collected in the NSFH, because few people are likely to know their parents' income while growing up. However, respondents were asked whether their family received public aid before they were 16. If the inclusion of welfare receipt in the model eliminates or reduces the family composition effects this hypothesis gains more support. Also, when a new (step) family

[1] GEDs are degrees issued by the General Educational Development Program. See appendix for comparison of NSFH and published figures on age at GED receipt.

is formed, income usually increases and thus, step-parent families are expected to have higher graduation rates than single parent families.

The variables to test the stress hypothesis are age at disruption and family composition at age 15. A later age at disruption is predicted to be more harmful than an earlier one, because the impact on high school graduation is more direct. This theory also predicts that, because remarriage is a second period of stress, those who experience a remarriage will have lower proportions obtaining their high school diploma.

From the child development-socialization perspective it is usually argued that younger children are more strongly affected by the lack of a role model than are older children (Hetherington, Cox and Cox, 1979). Thus, those experiencing disruptions at younger ages should have lower proportions graduating. The socialization hypothesis also predicts that those from step-parent families will have higher graduation proportions than those from single parent families, because the hierarchy of the family is restored and sons gain a role model.

There is some evidence that earlier disruptions (age 0-5) are more harmful than later ones (Krein and Beller 1988), but other research (Baydar, 1988; Martinson and Bumpass, 1990) has not found a strong age at disruption effect.

The effects of family background may also differ by sex of the respondent (Dornbusch et al., 1985; Krein and Beller, 1988). These studies show that boys are more strongly affected and are affected for a longer time than girls. Hetherington et al. (1979, 1983) hypothesize that the effects are larger for boys because the father is usually the absent parent in single parent households. Baydar's (1988) work, however, does not

support this hypothesis. An interaction term between sex and family composition is included to test if the effects are stronger for males than females.

[FIGURE 1]

Control Variables

Separate models are run for blacks and whites, because of interactions between race and many of the other independent variables. For instance, there is evidence that the effects of family composition are smaller for blacks than for whites (Hetherington at al., 1983; Wilson and Allen, 1987).

Parents' education indexes occupational goals parents are likely to have set for their children, the level of importance parents place on education, school quality, and access to resources for extracurricular activities (important to keeping students' interest in school).

In addition to race and parents' education, other control variables are age of respondent, southern residence, and number of siblings. Age is divided into two categories: 25 to 34 years and 35 to 44 years old. For the section concerning college attendance and graduation the age categories change to 30 to 37 and 38 to 44.

It is possible that a relationship between family composition and educational attainment could exist and yet be spurious. That is, those families that experience a disruption have some unmeasured factor that also causes children from these families to have lower educational attainment. For example, such a factor might be lower level of family commitment, which results in a higher probability of divorce and smaller investments in children. The reason for a disruption is, in part, added to this analysis

to test for the presence of a spurious relation. Since family disruptions caused by the death of a parent are more randomly distributed than are family disruptions caused by divorce, according to the 'no effects' hypothesis, the effect of a divorce should be stronger than the effect of a death.

Methods

Because the dichotomous dependent variables violate the assumptions of ordinary least squares regression, the logit transformation of π, π' is used, where

$$\pi' = \ln \frac{\pi}{1-\pi}.$$

Logit coefficients are transformed to percentages by a method described in Petersen (1985).

Results

Family Composition Effects on High School Graduation. Table 1 contains the results from cross tabulations of the two dependent variables measuring high school graduation by the independent variables for whites and blacks separately. GRAD1 does not include as high school graduates those who passed the GED test, while GRAD2 does. Thus, the percent receiving a GED is GRAD2 - GRAD1. Eighty-two percent of the white population born between 1943 and 1962 received a high school diploma, and when GEDs are included this figure rises to over 92 percent. Only 71 percent of the black population received their high school diplomas, and another 8 percent have GEDs. There is substantial variation by family background, however, especially for whites.

[TABLE 1]

Whites with intact families have higher proportions graduating than those from disrupted families. The proportion graduating is especially low for those who were in step-parent families at age 15 (66 percent vs. 88 percent for intact families). Those from step-parent and Other families are most likely to have GEDs. Thus, when those with GEDs are included as high school graduates, the differences by family structure are reduced.

There is less variation for blacks than there is for whites in the percent graduating by family structure. For blacks, single-parent families, not step-parent families, have the lowest proportion graduating (65 percent for single parent vs. 75 percent for intact families). Because a lower percentage of the black population receives high school certification through the GED program, including GEDs as high school graduates does not change the effects of family composition as much as it does for whites.

Differences by age are generally small, with one exception. Ten percent of younger blacks have GEDs, while only 4 percent of the older blacks have GEDs. Males and females have equal proportions graduating among both blacks and whites, and those from the south have a lower percent graduating from high school than those from other regions.

Having received public assistance during childhood is strongly related to graduation from high school. Those who report receiving aid are much less likely to have graduated from high school than those who do not, but this difference is reduced when GEDs are included as graduates because a high percent of those who received

public aid passed the GED test.

The results of the logistic regressions with the high school graduation measures as the dependent variables are in Tables 2 and 3. Each table has two sets of models: a set with only those with diplomas included as high school graduates, and a set with GEDs coded the same as high school diploma.

The first column serves as a reference point for the two adjusted models and carries the same information as Table 1. The second column contains the results from a model with family composition of household at age 15, parents education, race, sex, age, number of siblings, and region. The estimates in the third column are from a model which includes all of the above variables and adds having received welfare. The welfare variable holds constant the effects of family composition as mediated by economic deprivation. The effects which remain are attributed to stress, socialization or selection. An interaction term between family composition and sex does not significantly improve the fit of these models, and thus is not included. The significance of this finding is discussed below. The numbers in the second and third columns are the differences in the percentage completing high school between the designated category and the reference categories with all other variables in the models held at their means. For example, without adjusting for differences in parents' education, race, sex, age, number of siblings and region, among whites those who were in single parent households at age 15, 12 percent fewer graduated than those who were living with both of their parents. Once these factors are controlled this difference is reduced to 3 percent; when welfare receipt is added to the equation there is only a difference of less than one percent.

Figures 2 and 3 represent the family background effects in Tables 2 and 3. The omitted category is Lived with Both Parents at Age 15, and the bars represent the difference between the omitted category and other family types. The taller the bar the greater the disadvantage compared to those from intact families.

Table 2 and Figure 2 show that for whites the effect of family composition is reduced when parents' education, sex and age are controlled. When welfare receipt is added to the equation, family composition effects decrease even more, but neither model explains the lower graduation proportions for those from step-parent families, which have the lowest percentage graduating of all the family types.

[TABLE 2, FIGURE 2]

When GEDs are included as high school graduates, in the last three columns of Table 2, the effect of family composition is greatly reduced. This reduction is especially great for those from step-parent families. (In addition, the effect of welfare receipt, which is strong when GEDs are not included as high school graduates is much smaller when GEDs are considered graduates.)

Table 3 and Figure 3 show the patterns for blacks. Unlike the case for whites, the effect of family composition is stronger for single parent and Other families than for step-parent families. Adding aid to the model after parents' education, age, sex, and region are controlled reduces the effects of family composition by nearly 50 percent.

[TABLE 3, FIGURE 3]

Discussion. The lower proportion graduating among whites from step-parent families seems to reflect something other than either the lack of a role-model or reduced

income among those who were not living with both of their parents at age 15. While the economic deprivation hypothesis predicts that because remarriage increases the family income it thus increases the ability of children to finish high school, the socialization hypothesis argues that through remarriage the lost role model is replaced, and as a result the damage done by a divorce is reduced. On the other hand, the stress hypothesis predicts that those from single parent families will have lower graduation rates than those from intact families, because of the stress involved with a change in family structure. Because gaining a step-parent involves another possibly stressful transition, those from step-parent families are hypothesized to have even lower graduation proportions. Therefore, for whites a variant of the stress hypothesis receives the most support. That is, it is not the stress of marital dissolution which affects children as strongly as the stress of gaining a step-parent. For blacks, however, the economic deprivation hypothesis seems more relevant. Family composition effects are not significant for blacks, but unlike whites, blacks from step-parent families have higher proportions graduating than those from single parent families.

The lack of a significant interaction between family composition and sex also does not support the theory that the lack of a role model is a cause for lower graduation proportions. Since children are more likely to stay with their mothers than with their fathers, boys lose their role model and thus family disruption effects should be greater for males than females. While there may be some socialization effects, these results indicate that they are not as important as the effects of stress resulting from family disruption.

Reason for and Age at First Separation from a Parent

To further examine the consequences of living in a non-intact family, reasons for exposure to different family types are investigated. In Tables 4 and 5, two sets of independent variables are examined: one including reason for separation from a parent, and one including age at disruption. These models include only those respondents who were not living with both parents at age 15. As in the previous tables, GEDs are not considered high school graduates in the first three columns of the table and are included as graduates in the second three columns. The analysis is run for whites and blacks separately.

Figures 3 and 4 show the differences in percent graduating by reason for the separation from a parent for whites and blacks. The omitted category of Reason for Disruption is death of a parent. For whites, separation or divorce results in a lower percent graduating than does death of a parent, and controlling for parents' education, race, age, sex, number of siblings, region, and welfare receipt does not change this difference. Those for whom the reason for disruption is unknown have the highest proportion not receiving high school degrees. Adjusting for parents' education, race, sex, age, number of siblings, region and welfare receipt does not reduce the amount of difference between those who were separated from a parent as the result of the death of that parent and those who were separated for any other reason. These relations continue when GED recipients are included as graduates, although the magnitude of the differences is reduced, especially for the No Answer category.

[TABLE 4, FIGURE 4]

The difference between those experiencing their parents' separation and those who lost their parent through the death of that parent indicates that there are some other explanatory factors than the ones in these models. One of these factors might be the stress and conflicted loyalties children experience because of parental disagreement. As Sandefur et al. (1989) point out, divorce might be the result of a lower level of commitment to family, and that lower commitment also translates into smaller investments into children. Thus, it may not be the divorce *per se* that is producing lower probabilities of graduation, but lower levels of parental involvement. Another unmeasured variable could be level of conflict in families. Some people are more argumentative than others, and perhaps these people are more likely to divorce than those who are more complacent. Thus, if it is the stress of conflict within a marriage that affects children, the observed effects of family structure are the result of characteristics of the parents rather than divorce *per se*.

For blacks, the difference between those whose parents divorce and those whose parent died is negligible. Respondents who were non-marital births or were separated from their parent for the first time for Other reasons have the lowest proportions obtaining high school diplomas. Because there is no difference between those whose parents divorced and those whose parent died, the selection hypothesis is not a possible explanation as it is for whites.

[TABLE 5, FIGURE 5]

Models including those who were living with both parents were run for whites to see if those who were separated from a parent at the death of that parent were

significantly less likely than those from intact families to drop out from high school. The results (not shown) indicate that there no differences between these two groups. This indicates that it is the divorce or the unmeasured qualities of families that have a divorce and not parental absence that affects educational attainment.

The bottom half of Tables 4 and 5 and Figures 6 and 7 contain the results of models run to ascertain the effects of age at family disruption. The category of age at separation selected as the reference group is 0-5. In Figure 6, for whites, the age at disruption that least affects chances of graduating from high school is age 13-15. Among blacks, those who experience a disruption at age 6-12 have the lowest proportion dropping out, while non-marital births have the lowest percentage graduating.

The age at disruption variable is used primarily to test the socialization and stress hypotheses. The socialization hypothesis predicts that those whose first separation from a parent is at a young age are more likely to be affected than those whose separation occurs at a later age. The stress hypothesis, however, predicts that disruptions at later ages have stronger effects. The lower graduation proportions among blacks who are non-marital births, and thus never lived with their father, might support the socialization hypothesis, as might the larger proportions graduating among whites whose first separation from a parent occurred when they were between the ages of 13 and 15.

College Attendance and Graduation

In the previous section theories on the degree and path of influence of family composition on high school graduation were examined. For whites, family composition continues to have an effect after parents education, age distribution, and public

assistance are held constant. When GEDs are added as high school graduates, however, the effect of family composition disappears for single parent and Other families. We now investigate effects of family composition on higher levels of education and the role of GEDs in attenuating family structure effects for higher levels of education. For this section of the analysis, those who either completed high school or passed a GED test are included, while those who are age 25-29 are dropped from the sample to reduce problems with censoring on college entrance and graduation.

The first dependent variable is having continued formal education beyond high school in either a two- or four-year college; vocational school enrollments are not included. The second dependent variable is having graduated from college. Only those who complete a four-year college program are considered college graduates.

The independent variables include family composition at age 15, parents' education, age, sex, region, number of siblings, welfare receipt, and GED. The GED variable is coded 0 if the respondent received a diploma at high school graduation and 1 if they received certification as the result of passing a GED examination.

Table 6 presents cross tabulations with the dependent variables college attendance and graduation, for whites and blacks. In regressions predicting college attendance, an interaction term between family composition and sex significantly improves the fit of the model for whites, and thus the effects of family composition are shown separately for males and females.

[TABLE 6]

Family composition has a much smaller effect on white males' college attendance than white females' attendance, and the difference between males and females is especially strong for step-parent and Other families. While 64 percent of white males from step-parent families go on for further education, only 39 percent of the females who were living with a step-parent at age 15 have some college education.

The difference between males and females in family effects on college attendance is not found with respect to college completion. That is, while the sex-family composition interaction term is significant when predicting college attendance it is not when predicting college completion. Step-parent families are least likely to have their children go on to college once they have graduated from high school, and whites from single parent and Other families have a similar percentage graduating (23 and 20 percent, respectively), which are nearly fifteen percent lower than those from intact families (36 percent). The lower proportions of whites from step-parent families attending or completing school may be because step-parents (or Other families) are not willing to finance their step-children's college education, especially when they are step-daughters.

The effect of family composition for black males is not significantly different from the effect for black females and therefore no interaction term is included. Family composition has smaller effects for blacks than whites, and unlike whites, blacks from single parent families have the lowest proportion graduating from college (10 percent vs 21 percent for intact families). Blacks from step-parent or other families have slightly lower graduation proportions than those from intact families (17 and 14 percent vs. 21

percent, respectively).

Respondents who report that they received public assistance have lower percentages with college degrees. Among whites, only 10 percent of those who report having received public assistance graduated from college, while 34 percent of those who do not report welfare receipt received a college diploma. Twenty percent of the blacks who do not report welfare receipt graduated from college, but only three percent of the blacks who reported having received welfare percent graduated.

The reduction of family effects on high school completion through GEDs clearly does not equalize educational attainment. Sixty-three percent of the whites and 35 percent of the blacks who graduated from high school went on to college, but only 28 percent of the whites and 4 percent of the blacks who passed the GED test continued in school. While 9 percent of the whites who passed the GED completed a college program, none of the blacks with GEDs obtained a college degree.

Table 7 contains the results of the regression analyses for whites with college attendance as the dependent variable. For males, controlling for parents' education, race, age, number of siblings, and region eliminates the difference between families that experienced no disruption and families that did, but these differences do not disappear for females. In fact, for females, even in model three, where welfare receipt and GED are included in the equation, the effect of being from a step-parent or Other family remains essentially unchanged. For males, however, those from step-parent or Other families have higher proportions attending college than those from intact families.

[TABLE 7]

When college graduation is the dependent variable, the effects of family composition are maintained throughout all the models. Persons from step-parent families are 22 percent less likely than those from intact families to complete college, while single parent and Other families have comparable proportions graduating from college with 13 and 16 percent fewer than those from intact families.

The last models in Table 7 show that even controlling for family background, GED holders have a very low probability of attending or completing college. While the effects of being in a step-parent family are small at the high school graduation level (when GEDs are included as high school graduates), these effects are much stronger at higher levels of education. This is in part caused by the fact that those from step-parent families are more likely than any other group to have received GEDs, and those who get GEDs are least likely to go on for further education. Thus, it is important to distinguish between the two types of high school certification in order to see the effects of family composition on high school graduation.

Table 8 shows that, among blacks, family composition has no negative effect on chances of attending college. In fact, those from Other family types are most likely to go on to further education, although this effect is not significant. When college graduation is the dependent variable, non-intact families have lower percentages obtaining a college degree, but these effects do not persist in the adjusted models. Once the effects of parents' education, age, sex, region, number of siblings, and welfare receipt are controlled, the differences among the different family types in the proportions graduating from college disappear. As was the case for whites, blacks who pass GEDs

are not as likely to attend or complete college as those who graduate from high school.

[TABLE 8]

Table 9 contains the results of regressions predicting college attendance and graduation for the total population and includes those who did not receive high school certification. The results are similar to those found for whites when only those with high school certification are included. Family composition has no significant effect on college attendance, once parents' education, mother's education, race, age, region, sex, and welfare receipt are controlled. Family composition has a stronger influence on college graduation. All of the coefficients approach significance, and those from step-parent families have 8 percent fewer graduating net of other variables.

[TABLE 9]

Discussion. Continuing education past high school is even more dependent on the amount of family resources to which a potential student has access than high school graduation, because while public high school is free, college is not. Thus, it is likely that family composition's effects, through income, will continue beyond high school.

This is evidenced by the fact that very few of those whose families received aid continue schooling past high school, and even fewer graduate from college. Furthermore, controlling for welfare receipt reduces the effects of family composition on the decision to go to college. The lower continuation rates of persons from step-parent families than from single parent families is especially true when the step-children are daughters. This suggests that factors other than economic ones are at work; perhaps step-fathers are less willing to pay for the education of their wife's children.

Family composition effects on the proportion of whites graduating from college are large and cannot be explained by the variables in the model, but for blacks there is little evidence that family composition effects chances of college attendance or graduation net of these variables.

GEDs

It is interesting that GEDs help attenuate some of the negative effects of family composition. Because those with GEDs are significantly less likely than those with high school diplomas to attend and graduate from college, it is clear that GEDs should not be considered as equivalent to high school diplomas. In addition, those with GEDs are less likely to be employed and the socioeconomic status of their current or most recent job is significantly lower than those with high school diplomas. This difference holds even when college attendance is controlled (Raley, 1990). Since respondents who have GEDs often consider themselves high school graduates, the effect of family composition on high school graduation is underestimated unless GEDs are separated from high school diplomas.

Conclusion

The increase in divorce and child bearing out of wedlock has received much attention, in part because of the concern that being in a non-intact family has enduring negative consequences on the lives of children. The preceding analyses show that this argument is more true for whites than for blacks with regard to educational attainment. Furthermore, it is not single motherhood *per se* that is detrimental, but the stress and lower income associated with marital break-up that accounts for most of the differences in graduation rates by family composition.

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Appendix Table 1

Comparing the American Council on Education GED Report to NSFH on age at which GED is received.

	NSFH			GED Report
GED age	1970+	1975+	1980+	1986
<17	12.7	12.3	10.1	9.2
18,19	24.7	24.7	22.8	23.8
20-24	28.5	27.0	28.7	26.2
25-29	10.9	12.4	14.0	14.8
30-34	7.7	7.3	8.5	9.5
35-39	3.8	4.3	4.7	6.2
40-49	8.4	7.7	7.8	6.6
50-59	3	3.7	2.8	2.8
60+	0.4	0.5	0.5	0.8
N	538	41	291	

These figures are not directly comparable because the American Council on Education report (1986) includes everyone who is tested, while the NSFH only includes those who received certification.

Table 1: Proportion+ with High School Degree by Independent Variables by Race

Constant	WHITE				BLACK			
	N	GRAD1	GRAD2	GED	N	GRAD1	GRAD2	GED
Family Comp								
Both	3509	88.3	93.9	5.6	626	74.9	81.2	6.3
Single	360	76.8	88.4	11.6	291	65.0	74.6	9.6
Step	358	66.3	83.9	17.6	110	69.4	77.8	8.4
Other	148	67.9	86.3	18.4	111	68.7	77.4	8.7
FathEd(12)								
<12	1452	89.0	95.3	6.3	211	79.2	87.1	7.9
13-15	1240	78.2	88.3	10.1	332	70.8	78.8	8.0
16+	413	91.9	97.8	5.9	48	87.4	96.6	9.2
Else	755	96.5	99.2	2.7	54	94	98.1	4.1
	516	66.5	79.9	13.4	493	64	71.4	7.4
MothEd(12)								
<12	2038	90.0	96.0	6.0	362	80.0	88.4	8.4
13-15	1014	73.9	85.4	11.5	406	65.5	74.4	8.9
16+	534	92.0	98.5	6.5	71	95.4	97.7	2.3
Else	508	95.4	97.5	2.1	72	96.5	98.0	1.5
	282	54.5	71.2	16.7	227	51.8	59.2	7.4
Age(25-34)	2326	84.3	92.3	8.0	665	71.9	81.8	9.9
35-44	2050	85.5	92.6	7.1	473	70.4	74.6	4.2
Sex(Male)	2158	84.8	92.7	7.9	491	70.6	78.1	7.5
Female	2190	84.9	92.1	7.2	647	71.8	79.3	7.5
Region(Non-South)	3019	87.3	93.7	6.4	530	74.4	82.2	7.8
South	1356	79.4	89.5	10.1	608	68.5	75.8	7.3
Welfare(No)	4036	86.9	93.6	6.7	899	74.9	80.8	5.9
Yes	311	58.4	76.4	18.0	239	57.4	71.4	14.0
Total	**4376**	**81.9**	**92.4**	**10.5**	**1138**	**71.2**	**78.8**	**7.6**

+ Weighted to represent characteristics of the total population.
Data from 1987-88 National Survey of Families and Households.

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Table 2: The Effects[1] of Family Composition on High School Graduation

Whites	GEDs not Indcluded			GEDs Included		
	Unadjusted	Diff %*	Diff %*	Unadjusted	Diff %*	Diff %*
Constant		96.0	98.3		98.3	99.2
Family Comp				93.9		
Both	88.3			-9.5	-0.5	0.0
Single	-11.5	-2.8*	-0.8		(-0.73)	(0.00)
		(-2.23)	(-1.28)	-10.0	-2.2*	-0.8*
Step	-22.0	-8.8*	-3.8*		(-2.93)	(-2.35)
		(-5.90)	(-5.18)	-7.6	0.3	0.2
Other	-20.4	-3.5	-1.5		(0.35)	(0.53)
		(-1.90)	(-1.67)	93.6		
Welfare(No)	86.9			-76.4		-1.7*
Yes	-28.5		-4.3*			(-4.99)
			(-6.20)	92.4		
Total	81.9				1879.3	1856.1
-2LogLikelihood		3009.8	2973.0		4360	4359
Deg. Freedom		4360	4359			

1 Logit models control for mother's and father's education, age, sex, region, and number of siblings.
+ Coefficients converted from log-odds ratios to differences in percent graduating.
* Coefficient is twice its standard error. Z-score is in parentheses.

Table 3: The Effects[1] of Family Composition on High School Graduation

Blacks	GEDs not Included			GEDs Included		
	Unadjusted	Diff %*	Diff %*	Unadjusted	Diff %*	Diff %*
Constant		79.8	88.0		83.0	87.8
Family Comp				81.2		
Both	74.9			-6.6	-7.9	-4.9
Single	-9.9	-10.8	-5.6		(-1.38)	(-1.05)
		(-1.87)	(-1.29)	-3.4	-6.4	-4.9
Step	-5.5	-7.3	-4.7		(-0.82)	(-0.77)
		(-0.95)	(-0.82)	-3.8	-3.8	-2.2
Other	-6.2	-4.1	-1.6		(-0.41)	(-0.29)
		(-0.44)	(-0.24)	80.8		
Welfare(No)	74.9			-9.4		-6.6
Yes	-17.5		-10.9*			(-1.60)
			(-2.74)	78.8		
Total	71.2				557.2	554.7
-2LogLikelihood		661.6	654.2		1122	1121
Deg. Freedom		1122	1121			

1 Logit models control for mother's and father's education, age, sex, region, and number of siblings.
+ Coefficients converted from log-odds ratios to differences in percent graduating
* Coefficient is twice its standard error. Z-score is in parentheses.

Table 4: The Effects[1] of Reason for and Age at Disruption on High School Graduation

White	GEDs not Included Unadjusted	Diff %[+]	GEDs Included Unadjusted	Diff %[+]
Constant		91.5		96.40
Whysep (Death)	80.6		90.9	
Sep/Div	-11.7	-10.8*	-5.4	-4.4
		(-2.86)		(-1.91)
NMB	-9.3	-12.5*	-8.6	-9.3*
		(-2.69)		(-2.83)
Other	-8.0	-5.6	1.1	0.6
		(-1.24)		(0.27)
Not Answered	-22.8	-27.2*	-10.5	-11.1*
		(-4.50)		(-2.95)
Welfare (No)	76.6		89.4	
Yes	-29.2	-19.0*	-16.4	-8.8*
		(-4.7)		(-3.53)
Total	70.9		86.2	
-2LogLikelihood		860.0		574.7
Deg. Freedom		920		920

	GEDs not Included UnAdjusted	Diff %[+]	GEDs Included UnAdjusted	Diff %[+]
Constant		83.2		93.2
Agedis (0-5)	68.1		84.9	
6-12	-0.8	-2.9	1.1	-0.2
		(-0.57)		(-0.07)
13-15	14.1	16.1*	7.2	7.1
		(2.69)		(1.69)
NMB	3.2	-2.2	-2.6	-8.0
		(-0.35)		(-1.60)
Welfare (No)	76.6		89.4	
Yes	-29.2	-18.6*	-16.4	-8.8*
		(-4.69)		(-3.58)
Total	70.9		86.2	
-2LogLikelihood		869.9		583.1
Deg. Freedom		921		921

1 Logit models control for mother's ad father's education, age, sex, region, and number of siblings.
+ Coefficients converted from log-odds ratios to differences in percent graduating.
* Coefficient is at least twice its standard error. Z-scores in Parentheses.

Table 5: The Effects[1] of Reason for and Age at Disruption on High School Graduation

Blacks	GEDs not Included Unadjusted	Diff %+	GEDs Included Unadjusted	Diff %+
Constant		77.89		85.3
Whysep (Death)	76.2		81.5	
Sep/Div	-1.9	-0.2 (-0.03)	-1.3	-1.7 (-0.43)
NMB	-15.6	-12.7 (-1.29)	-9.6	-4.8 (-1.11)
Other	-18.1	-14.7 (-1.12)	-15.8	-7.6 (-1.20)
NA	-6.9	-4.1 (-0.35)	2.4	1.0 (0.22)
Welfare (No)	71.5		78.2	
Yes	-14.1	-15.2* (-2.37)	-6.8	-3.7 (-1.22)
Total	66.7		75.9	
-2LogLikelihood		311.2		257.4
Deg. Freedom		505		505
	GEDs not Included UnAdjusted	Diff %+	GEDs Included UnAdjusted	Diff %+
Constant		74.6		83.1
Agedis (0-5)	69.0		78.9	
6-12	7.9	4.1 (0.47)	2.6	-1.0 (-0.23)
13-15	-2.5	-0.0 (0.00)	-4.3	0.0 (-0.01)
NMB	-8.4	-9.1 (-1.11)	-7.0	-4.1 (-1.03)
Welfare (No)	71.5		78.2	
Yes	-14.1	-14.3* (-2.28)	-6.8	0.0 (-1.20)
Total	66.7		75.9	
-2LogLikelihood		312.7		259.5
Deg. Freedom		506		506

1 Logit models control for mother's and father's education, age, sex, region, and number of siblings.
+ Coefficients converted from log-odds ratios to differences in percent graduating.
* Coefficient is at least twice its standard error. Z-scores in Parentheses.

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Table 6: Proportion* Attending College and with College Degree by Independent Variables by Race

	Some College			College Grad	
Family Comp/Male	**WHITE**	**BLACK**	**Family Comp**	**WHITE**	**BLACK**
Both	**66.5**	**52.6**	Both	**36.3**	**20.7**
Single	61.0	47.2	Single	23.0	10.3
Step	64.1	56.4	Step	14.2	16.6
Other	63.7	56.3	Other	20.5	14.4
Female					
Both	56.5				
Single	46.6				
Step	39.0				
Other	29.7				
FathEd(12)	**59.3**	**67.5**	**FathEd(12)**	**31.4**	**19.3**
<12	45.4	49.7	<12	19.3	15.7
13-15	78.5	67.8	13-15	47.0	51.8
16+	87.9	84.2	16+	64.9	46.0
Else	40.0	40.1	Else	15.5	9.5
MothEd(12)	**60.3**	**66.1**	**MothEd(12)**	**47.8**	**17.3**
<12	41.7	42.1	<12	19.4	12.9
13-15	80.8	66.4	13-15	49.0	45.4
16+	87.3	77.1	16+	65.6	69.8
Else	20.3	23.1	Else	3.6	34.2
Age(30-37)	**61.0**	**52.2**	**Age(30-37)**	**32.0**	**16.4**
38-44	58.4	52.1	38-44	35.2	19.3
Sex(Male)	**65.8**	**54.5**	**Sex(Male)**	**38.6**	**19.5**
Female	53.8	50.4	Female	27.9	16.0
Region(Non-South)	**60.9**	**59.6**	**Region(Non-South)**	**33.7**	**19.8**
South	57.7	45.6	**South**	32.9	15.5
Welfare(No)	**61.2**	**83.9**	**Welfare(No)**	**34.5**	**20.3**
Yes	37.1	16.1	Yes	10.8	2.6
GED(No)	**62.7**	91.1	**GED(No)**	**35.9**	**19.2**
Yes	27.7	8.9	Yes	3.7	0.0
Total	**59.9**	**52.2**	**Total**	**33.3**	**17.5**

+ Weighted to have the characteristics of total population.

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Table 7: The Effects[1] of Family Composition on College Attendance and Graduation Given High School Graduation/GED

College Attendance	Unadjust	%Diff*	% Diff*	% Diff*
White Constant		72.1	71.9	72.7
Family Comp Male				
Both	66.5			
Single	-5.5	-2.6	-1.8	-1.5
		(-0.58)	(0.81)	(-0.31)
Step	-2.4	2.3	4.7	6.8
		(0.53)	(0.76)	(1.58)
Other	-2.8	4.2	4.7	6.8
		(0.69)	(0.76)	(1.11)
Female				
Both	-10.0	66.1*	65.6*	64.6*
		(-5.07)	(-5.06)	(-5.20)
Single	-19.9	-3.1	-2.8	-2.4
		(0.01)	(-0.09)	(-0.09)
Step	-27.5	-18.9*	-18.0*	-14.2*
		(-2.66)	(-2.75)	(-2.80)
Other	-36.8	-23.5*	-22.8*	-20.5*
		(-2.36)	(-2.34)	(-2.39)
Welfare (No)	61.2			
Yes	-24.1		-7.5	-4.9
			(-1.74)	(-1.12)
GED (No)	62.7			
Yes	-35.0			-27.0*
				(-6.71)
Total	59.9			
-2Lglklihd		3302.8	3299.8	3251.0
Deg. Freedom		2890	2889	2888
College Grad	Unadjust	Diff %*	Diff %*	Diff %*
Constant		44.2	44.2	45.1
Family Comp				
Both	36.3			
Single	-13.3	-11.8*	-11.1*	-11.0*
		(-2.54)	(-2.39)	(-2.41)
Step	-22.1	-25.3*	-24.3*	-21.2*
		(-5.67)	(-5.40)	(-4.72)
Other	-15.8	-15.9*	-15.1*	-12.3
		(-2.41)	(-2.29)	(-1.85)
Welfare (No)	34.5			
Yes	-23.7		-12.5*	6.9
			(-2.02)	(-1.65)
GED (No)	35.9			
Yes	-32.2			8.5
				-6.26
Total	33.3			
-2Lglklihd		3097.4	3092.9	3029.6
Deg.Freedom		2893	2892	2891

1 Logit Models control for mother's and father's education, age, sex, region, and number of siblings.
+ Coefficients converted from log-odds ratios to differences in percent graduating.
* Coefficient is twice its standard error. Z-scores in parentheses.

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Table 8: The Effects[1] of Family Composition on College Attendance and Graduation given High School Graduation/GED

College Attendance Blacks	Unadjust	%Diff*	% Diff*	% Diff*
Constant		75.7	76.2	77.9
Family Comp				
Both	52.6			
Single	-5.4	0.7	1.8	2.4
		(0.08)	(0.21)	(0.27)
Step	3.8	1.4	2.0	3.0
		(0.12)	(0.18)	(0.26)
Other	3.7	15.9	17.4	17.8
		(1.45)	(1.55)	(1.60)
Welfare (No)	83.9			
Yes	-67.8		-6.0	-4.0
			(-0.67)	(-0.45)
GED (No)	91.1			
Yes	-82.2			-45.5
				(-1.97)
Total	52.2			
-2Loglikelihood		398.3	397.9	393.8
Deg. Freedom		609	608	607
College Grad	**Unadjust**	**Diff %***	**Diff %***	**Diff %***
Constant		17.9	19.5	21.6
Family Comp				
Both	20.7			
Single	-10.4	-3.8	-1.7	-0.8
		(-0.77)	(-0.40)	(-0.26)
Step	-4.1	-1.6	-0.3	0.6
		(-0.26)	(-0.06)	(0.15)
Other	-6.3	0.4	2.8	3.9
		(0.06)	(0.45)	(0.79)
Welfare (No)	20.3			
Yes	-17.7		-10.1*	-6.7*
			(-2.21)	(-2.01)
GED (No)	19.2			
Yes	-19.2			-17.9
				(-0.67)
Total	17.5			
-2Lglklihd		268.7	261.5	252.1
Deg. Freedom		609	608	607

1 Logit models control for mother's and fathers education, age sex, region and number of siblings.
+ Coefficeints converted from log-odds ratios to differences in percent attending and graduating.
* Coefficeint is twices its standard error. Z-scores in parentheses.

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Table 9: The Effects[1] of Family Composition on College Attendance and Graduation

	Attendance		Graduation	
Total	**UnAdj**	**Diff %[+]**	**UnAdj**	**Diff %[+]**
Constant		71.6		40.9
Family Composition				
Both	55.9		31.8	
Single	-12.0	-2.9	-15.3	-8.6*
		(-0.84)		(-2.40)
Step	-12.6	-6.1*	-19.6	-10.2*
		(-2.54)		(-5.52)
Other	-16.6	-2.2	-17.0	-3.5*
		(-1.07)		(-2.44)
Race				
White	55.8		30.9	
Black	-15.7	7.9*	-17.5	-3.2
		(2.70)		(-0.95)
MexAm	-25.5	-0.9	-24.6	-16.6*
		(-0.14)		(-2.31)
Other	-9.9	-21.8	-8.4	9.1
		(0.15)		(0.11)
Welfare Receipt				
No				
Yes	-26.2	-8.1*	-23.9	-14.5*
		(-2.19)		(-3.25)
Total	53.1		28.1	
-2 Loglikelihood		4189.4		3576.4
Deg. Freedom		4166		4166

1 Logit models include mother's and father's education, age, sex, region, and number of siblings.
+ Coefficients are converted from log-odds ratios to differences in percent attending and graduating.
* Coefficient is twice its standard error. Z-Scores in parentheses.

Figure 1: Expectations of the theories on the effects of family composition on educational attainment.

Variable	Economic Deprivation	Stress	Socialization
Welfare	Reduces the effect of family comp		
Step-Parent	+	-	+
Early Age at Disruption		+	-
Late Age at Disruption		-	+
Fam Comp/Sex Interaction			Males with stronger effects

Figure 2: Whites
The effects of Family Composition on Graduation from High School

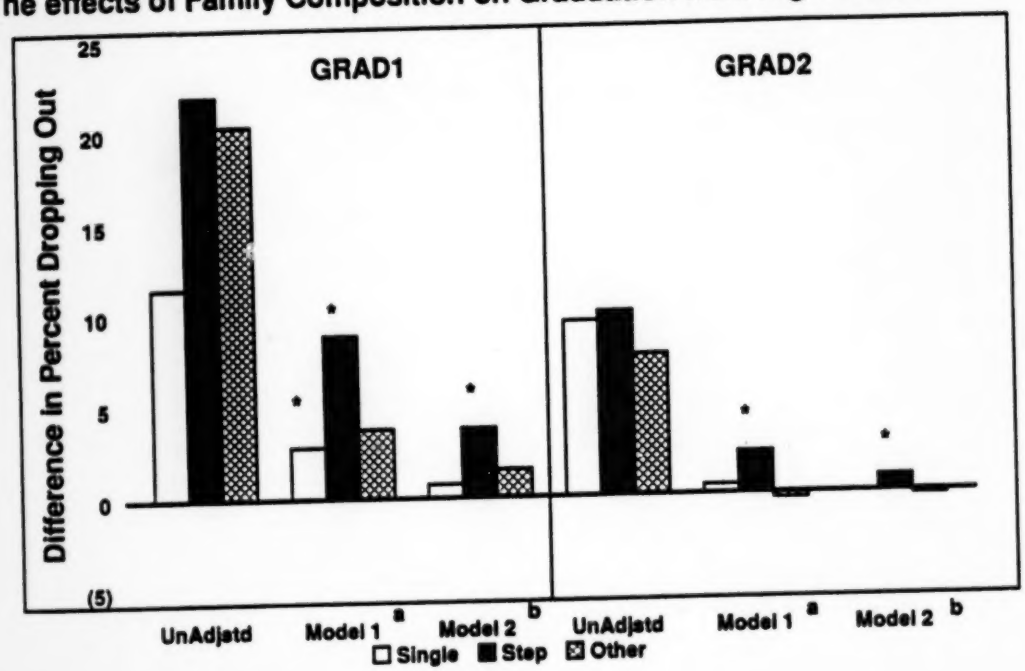
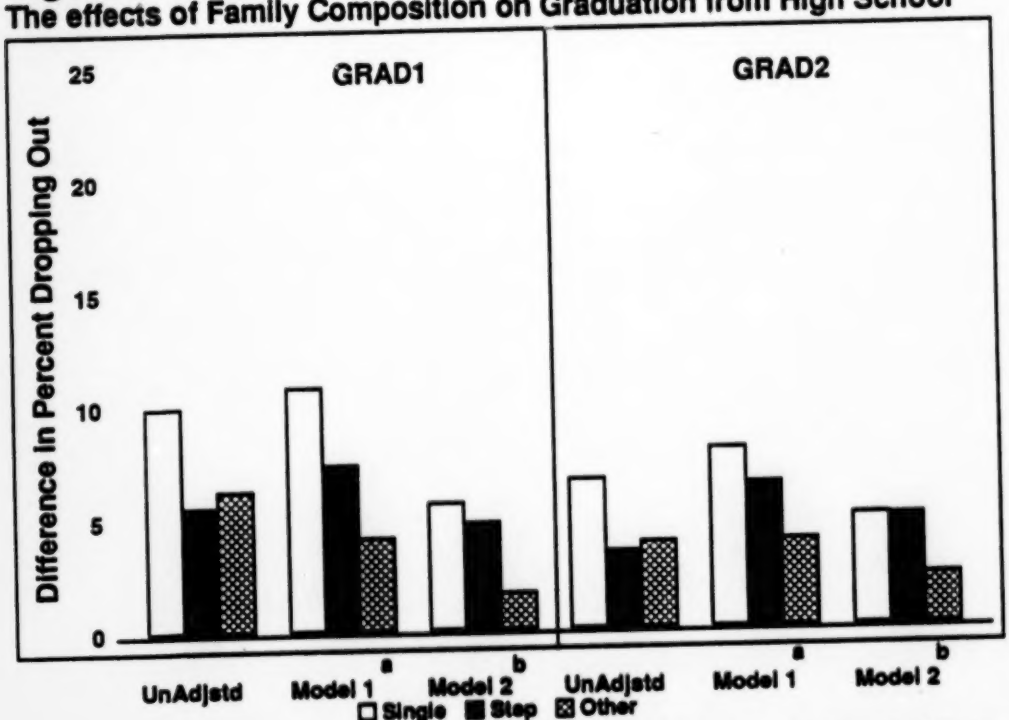


Figure 3: Blacks
The effects of Family Composition on Graduation from High School



a Logit model controls for parent's education, age, sex, region and number of siblings.
b Logit model controls for above and adds welfare receipt.

Figure 4: Whites
The Effects of Reason for Disruption on High School Graduation

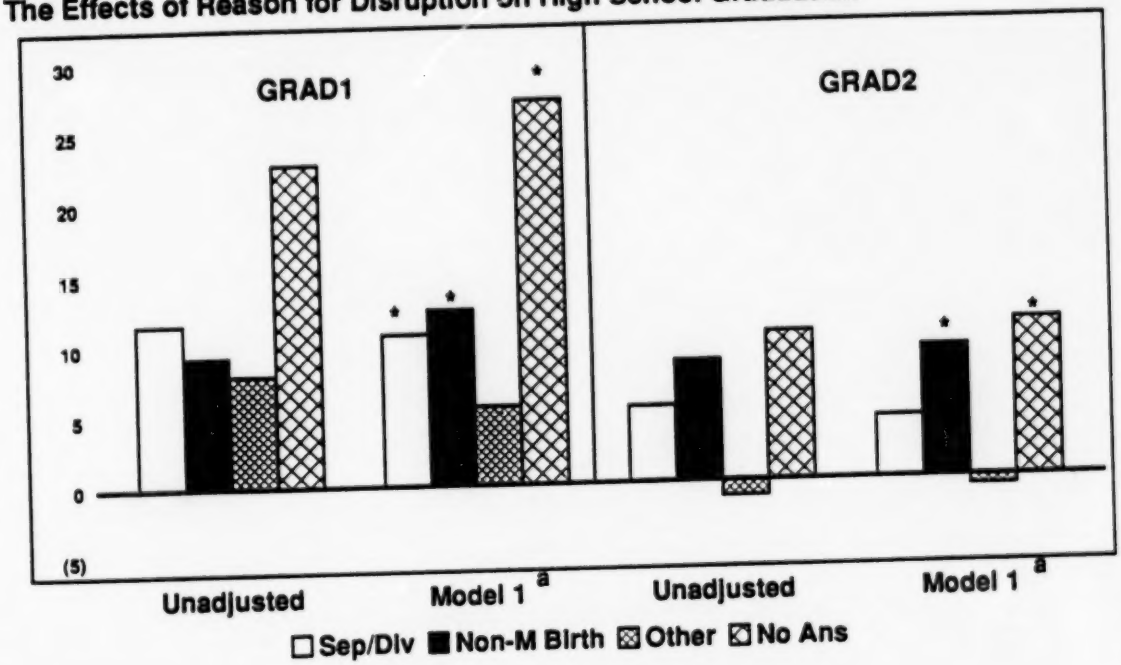
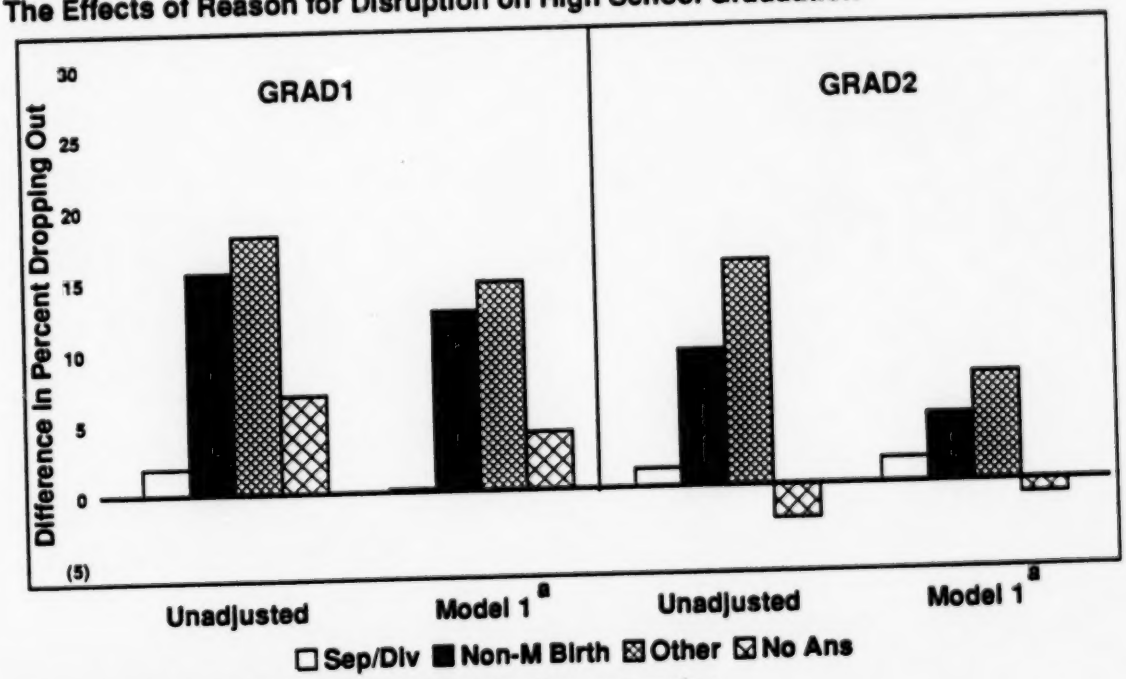


Figure 5: Blacks
The Effects of Reason for Disruption on High School Graduation



a Logit model controls for parent's education, age, sex, region number of siblings, and welfare receipt.

Figure 6: Whites
The Effects of Age at Disruption on High School Graduation

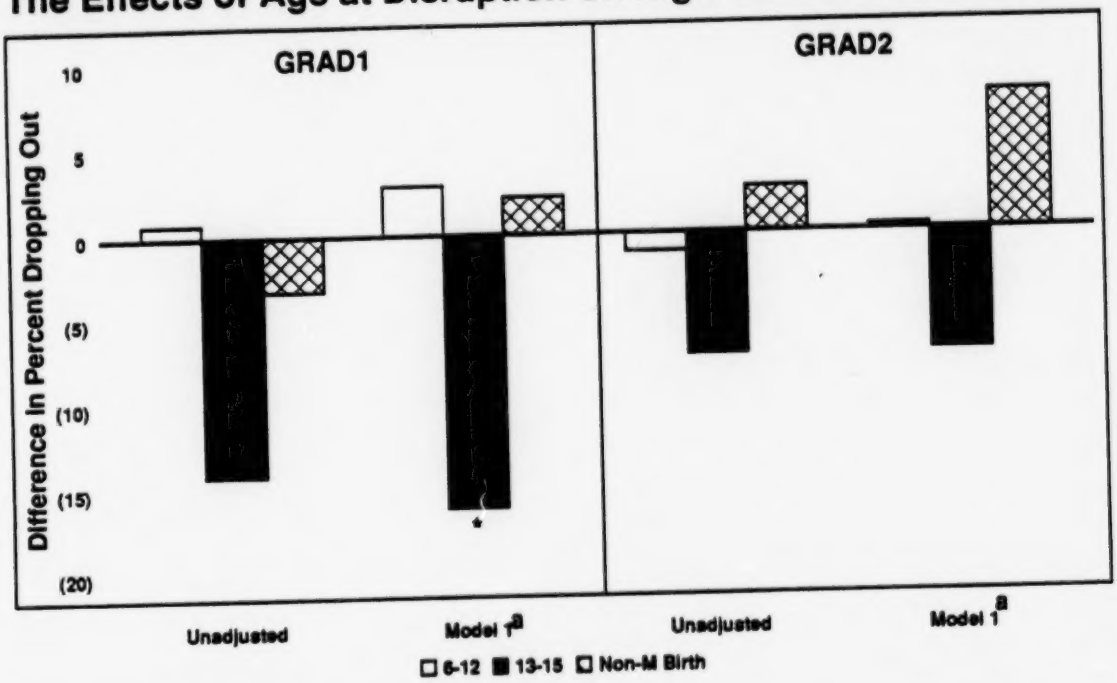
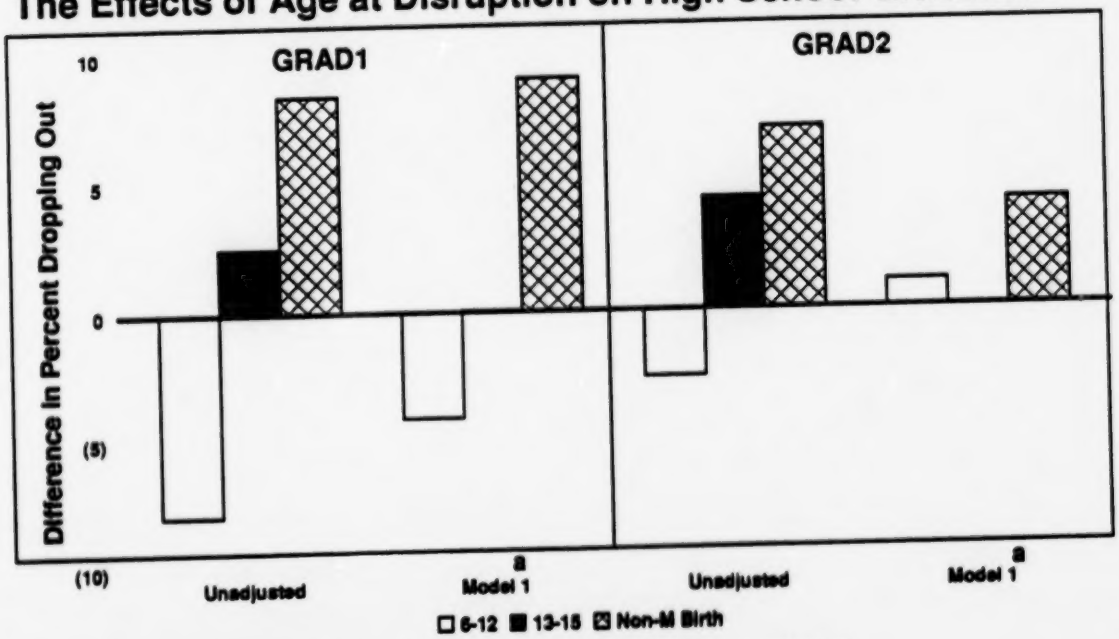


Figure 7: Blacks
The Effects of Age at Disruption on High School Graduation



a Logit models control for parent's education, age, sex, region, number of siblings and welfare receipt.